FIG.1 MANAGEMENT SERVER **STORAGE** _ 40 *3*0 *~* 35 CPU MEM BUF **CPU ~32 STORAGE** 43 *3*3 SN I/F √5-2 83 8 SN I/F SN I/F 60 **MANAGEMENT PORT** 63 63 CPU 80 81 61ر CPU 64 64 MEM MEM MANAGE-MENT PART BP I/F BP I/F **PORT** 84 BP I/F

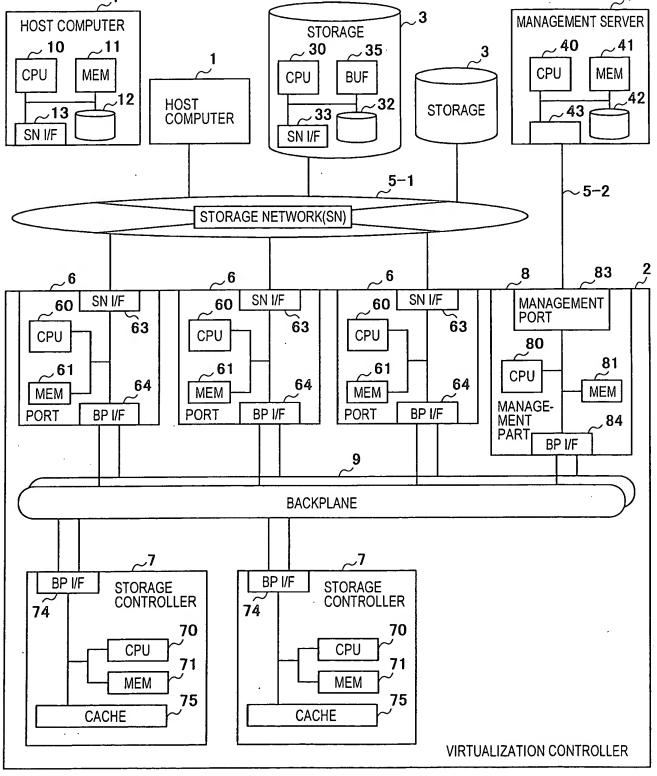


FIG.2

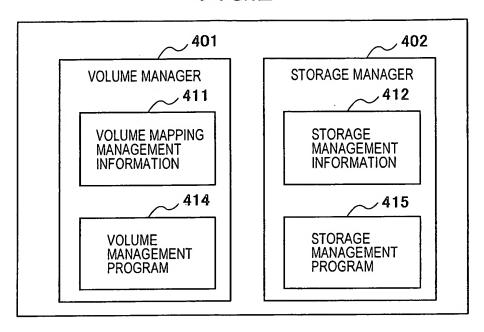


FIG.3

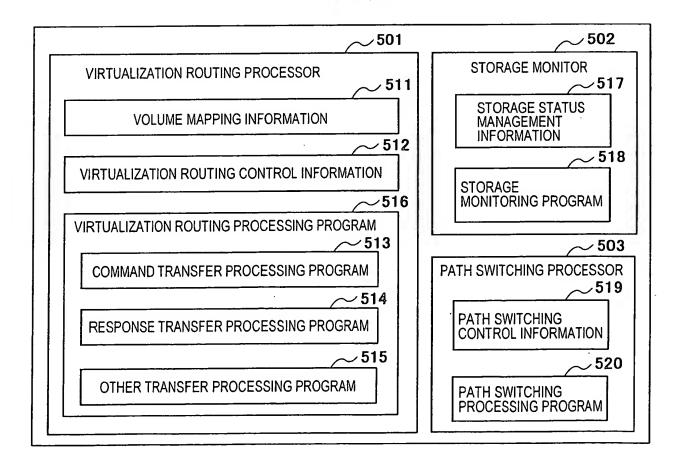
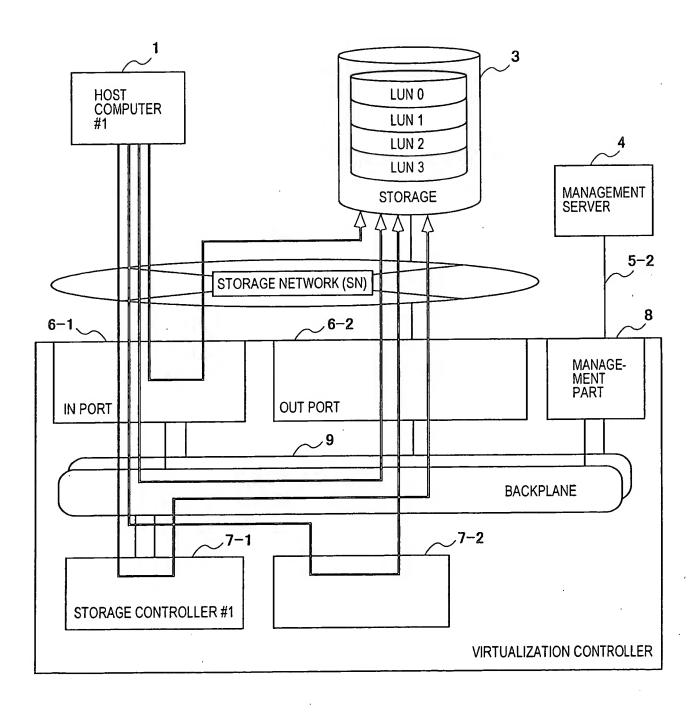


FIG.4



	511 531			532		533	53	4 535
VIRTUAL VOLUME MANAGEMENT INFORMATION		TION	REAL VOLUME MANAGEMENT INFORMATION			VIRTUALIZATION PROCESSING MODULE MANAGE-	STORAGE CONNECTION MODULE	COMMAND PROCESSING
PORT ID	PORT NAME	LUN	PORT ID	PORT NAME	LUN	MENT INFORMATION	MANAGEMENT INFORMATION	MODE
V_PID_1	V_PNAME_1	0	P_PID_1	V_PNAME_1	0	STORAGE CONTROLLER #1	OUT PORT	NORMAL
V_PID_2	V_PNAME_2	0	P_PID_1	V_PNAME_1	1	STORAGE CONTROLLER #1	OUT PORT	NORMAL
V_PID_3	V_PNAME_3	0	P_PID_1	V_PNAME_1	2	OUT PORT	OUT PORT	NORMAL
V_PID_4	V_PNAME_4	0	P_PID_1	V_PNAME_1	3	OUT PORT	OUT PORT	NORMAL
:	:	• • •	:	:	:	:	:	:

512	541	542	·
SENDING SOURCE	MANAGEMENT INFORMATION	SENDING DESTINAT MANAGEMENT INFO	
SENDING SOURCE IDENTIFICATION INFORMATION	SENDING SOURCE COMMAND IDENTIFICATION INFORMATION	SENDING DESTINATION IDENTIFICATION INFORMATION	COMMAND IDENTIFICATION INFORMATION
HOST_PID_1	HOST_TAG_1	STORAGE CONTROLLER #1	INPORT_TAG_1
HOST_PID_1	HOST_TAG_2	STORAGE CONTROLLER #1	INPORT_TAG_2
HOST_PID_1	HOST_TAG_3	OUT PORT	INPORT_TAG_3
HOST_PID_1	HOST_TAG_4	OUT PORT	INPORT_TAG_4
:	. :	:	:

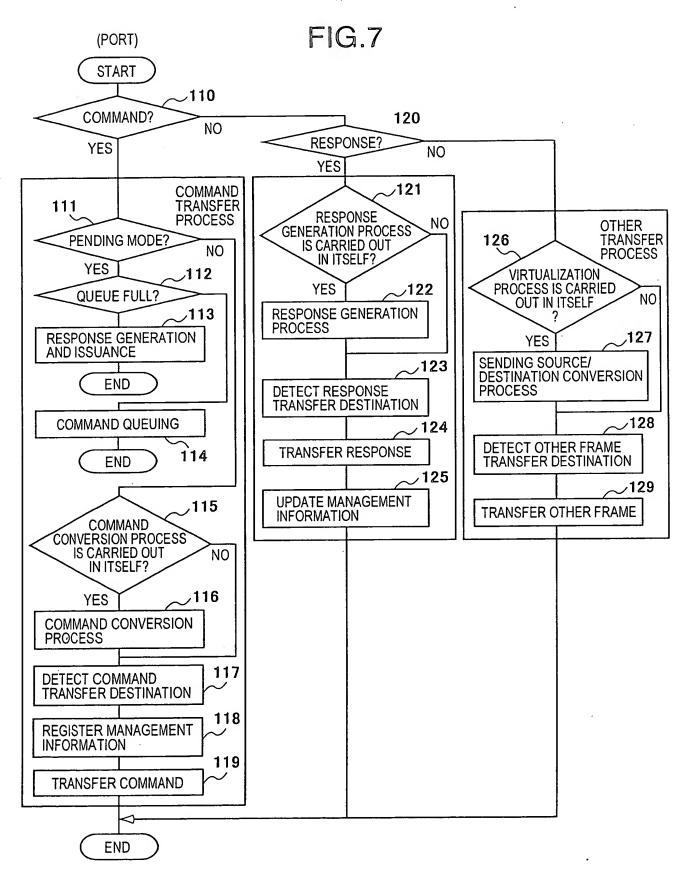


FIG.8

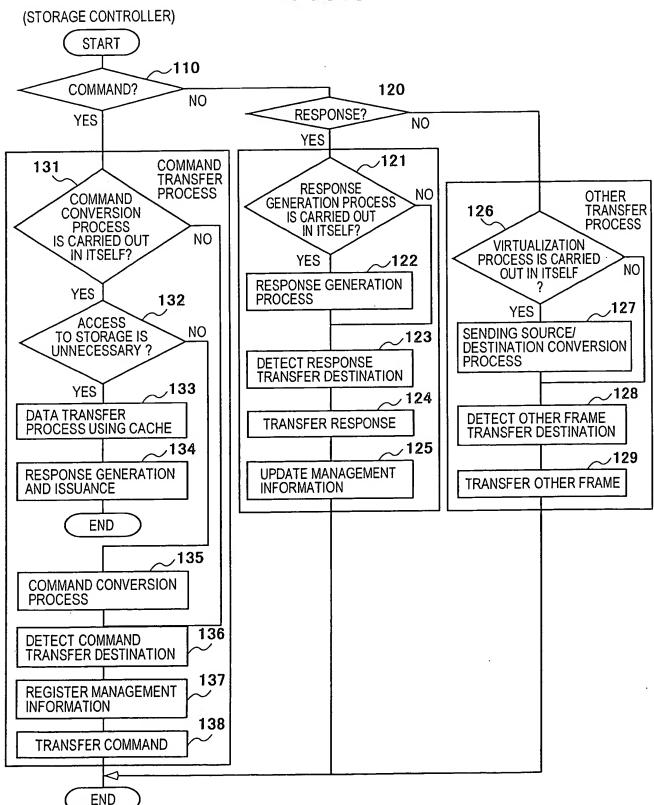


FIG.9

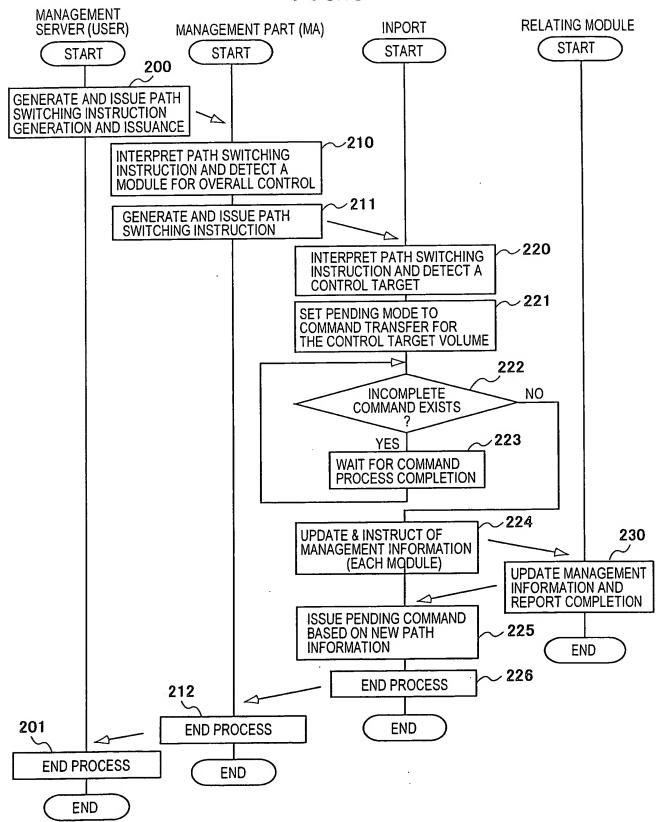
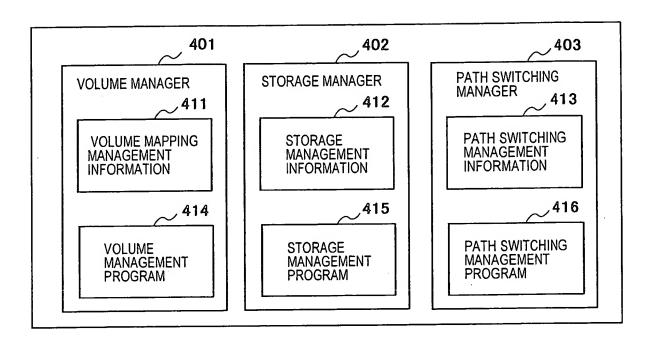


FIG.10



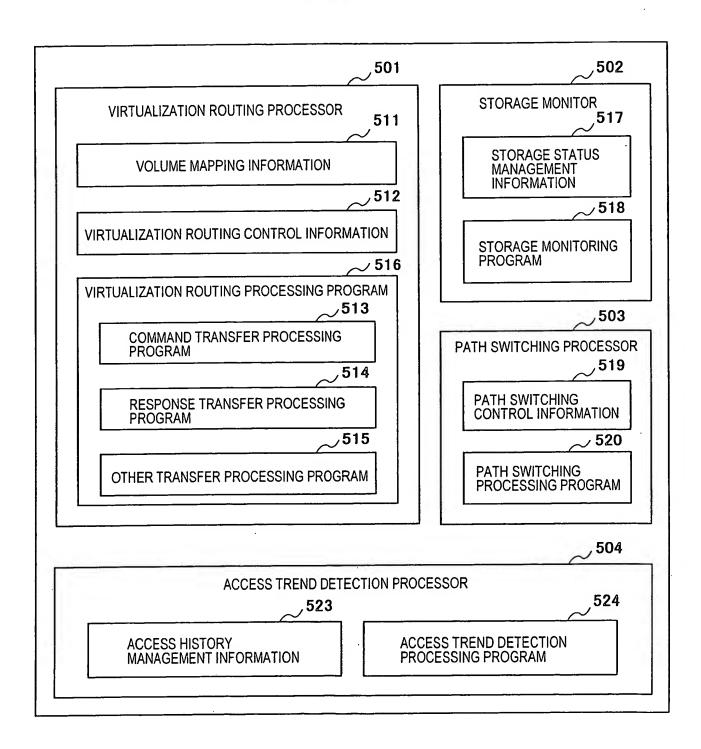


FIG.12

	550 ~	551	
	ACCÉSS TYPE	WEIGHED FACTOR	
	PROXIMAL ACCESS	2	
READ TYPE	IDENTICAL ADDRESS ACCESS	. 1	
ACCESS	CONTINUOUS ADDRESS ACCESS	-1	
	OTHER ACCESS (THE FIRST ACCESS)	0	
	ROXIMAL ACCESS	0	
WRITE TYPE ACCESS	IDENTICAL ADDRESS ACCESS	1	
ACCESS	CONTINUOUS ADDRESS ACCESS	-2	
	OTHER ACCESS (THE FIRST ACCESS)	0	

FIG.13

	523 ~		5	52			
	ACCESS TYPE	LUN 0	LUN 0 LUN 1 LUN 2 LU				
	PROXIMAL ACCESS	100	50	10	0		
	IDENTICAL ADDRESS ACCESS	100	50	10	0		
READ TYPE ACCESS	CONTINUOUS ADDRESS ACCESS	0	10	100	. 0		
	OTHER ACCESS	10	10	10	10		
	ROXIMAL ACCESS	10	50	0	0		
	IDENTICAL ADDRESS ACCESS	10	50	0	0		
WRITE TYPE ACCESS	CONTINUOUS ADDRESS ACCESS	0	10	0	100		
	OTHER ACCESS	10	10	0	10		

FIG.14

	523	552					
	ACCESS TYPE	LUN 0	LUN 1	LUN 2	LUN 3		
	PROXIMAL ACCESS	10	50	10	0		
	IDENTICAL ADDRESS ACCESS	. 10	50	10	0		
READ TYPE ACCESS	CONTINUOUS ADDRESS ACCESS	200	10	100	0		
	OTHER ACCESS	10	10	10	10		
	ROXIMAL ACCESS	0	50	0	0		
	IDENTICAL ADDRESS ACCESS	0	50	0	0		
WRITE TYPE ACCESS	CONTINUOUS ADDRESS ACCESS	0	10	0	100		
	OTHER ACCESS	10	10	0	10		

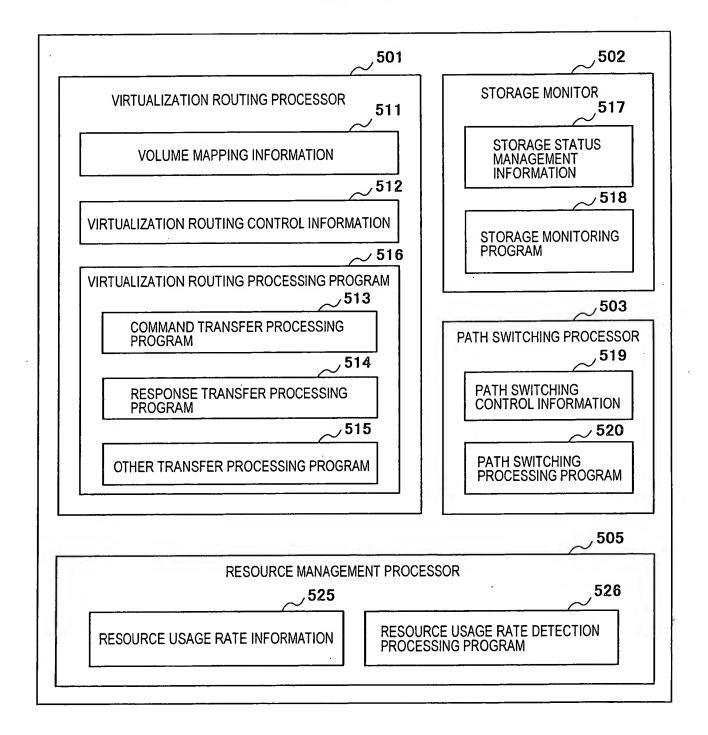
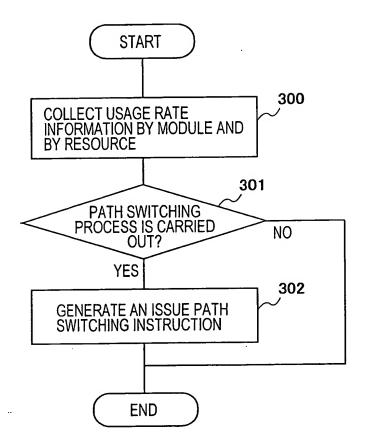


FIG.16

(MANAGEMENT PART)



	5	31	√ 51	1	532		533	534	535
VIRTUAL VOLUME MANAGEMENT INFORMATION			REAL VOLUME MANAGEMENT INFORMATION		VIRTUALIZA- TION PROCESSING MODULE	STORAGE CONNECTION MODULE	COMMAND PROCESS- ING		
PORT ID	PORT NAME	LUN	ADDRESS	PORT ID	PORT NAME	LUN	MANAGEMENT INFORMATION	MANAGEMENT INFORMATION	MODE
V_PID_1	V_PNAME_1	0	0h~ 98967Fh 989680h~ 1312CFFh	P_PID_1	P_PNAME_1	0	STORAGE CONTROLLER #1	OUT PORT	NORMAL
V_PID_2	V_PNAME_2	0	0h∼ 1312CFFh	P_PID_1	P_PNAME_1	1	STORAGE CONTROLLER #1	OUT PORT	NORMAL
V_PID_3	V_PNAME_3	0	0h∼ 1312CFFh	P_PID_1	P_PNAME_1	2	OUT PORT	OUT PORT	NORMAL
V_PID_4	V_PNAME_4	0	0h∼ 1312CFFh	P_PID_1	P_PNAME_1	3	OUT PORT	OUT PORT	NORMAL
	:	:	:	:	:	:	:	:	:

FIG.18

	~ 5	31	~ ⁵¹	11	_ 532		533	534	535
VIRTUAL VOLUME MANAGEMENT INFORMATION				REAL VOLUME MANAGEMENT INFORMATION			VIRTUALIZA- TION PROCESSING MODULE	STORAGE CONNECTION MODULE	COMMAND PROCESS- ING
PORT ID	PORT NAME	LUN	ADDRESS	PORT ID	PORT NAME	LUN	MANAGEMENT INFORMATION	MANAGEMENT INFORMATION	MODE
V_PID_1	V_PNAME_1	0	0h~ 98967Fh 989680h~ 1312CFFh	P_PID_1	P_PNAME_1	0	STORAGE CONTROLLER #1	OUT PORT	NORMAL
V_PID_2	V_PNAME_2	0	0h∼ 1312CFFh	P_PID_1	P_PNAME_1	1	STORAGE CONTROLLER #1	OUT PORT	NORMAL
V_PID_3	V_PNAME_3	0	0h∼ 1312CFFh	P_PID_1	P_PNAME_1	2	OUT PORT	OUT PORT	NORMAL
V_PID_1	V_PNAME_1	3	0h∼ 1312CFFh	P_PID_1	P_PNAME_1	3	OUT PORT	OUT PORT	NORMAL
:	:	:	:	:	:	•••	:	:	:

FIG.19 MANAGEMENT SERVER **HOST COMPUTER STORAGE** 11 ہے ال ر **~ 30** رے 35 1 CPU CPU MEM MEM CPU BUF 12 HOST COMPUTER **√32 STORAGE , 33** SN I/F 5-1 ~5−2 STORAGE NETWORK(SN) 2 83 8 SN I/F SN I/F SN I/F **MANAGEMENT** 60 60 60 **PORT** 63 63 63 CPU **CPU CPU** 80 81 61 سے 61 رے 61ر **CPU** 64 64 64 MEM MEM MEM MEM MANAGE-BP I/F **PORT** BP I/F **PORT** BP I/F **PORT** MENT 84 PART BP I/F **BACKPLANE** BP I/F BP I/F **STORAGE STORAGE** CONTROLLER CONTROLLER 74 74 70ر **70**ر CPU **CPU** MEM MEM **√75** CACHE CACHE ~73 **√73** HDD I/F HDD I/F **STORAGE** VIRTUALIZATION CONTROLLER